

stage than when partially made. Again, if the weather is favourable, time is lost by the delay. (1)

After the first tedding there is no reason why the machine, set in the back action, should not be put to work to turn the crop at once, with a view to hasten the process of making.

Incalculable damage has been done to our hay crops by the injudicious use of the forward-action of hay making machines, and this under the erroneous impression that, when in the back-action, the machine does not do enough to it. As every practical man knows, grass may be knocked about a great deal too much and this applies with double force to crops half-made, also to clover, which may be cut with a machine, *but should never be teded or turned except by hand.*

In a series of experiments I made many years ago I discovered that the barrels with the slowest speed for the back-action made the best work, the crop being left loose, and more hollow.

In windy weather it is desirable to arrange for working the haymaker, when used in the forward action, sidewise to the wind, this may often be done by working obliquely across the swaths, it is, however, desirable to avoid using the forward action when the wind is troublesome, inasmuch as the crop become very unevenly spread.

As the employment of hand labour is to be avoided as far as possible, the old-fashioned plan of drawing the crop into hacks with wooden rakes has long been abandoned by the *more skilful, and the horse rake adopted for drawing the crop into windrows.* Again, as soon as the crop is beginning to emerge from the grass condition into that of hay, instead of hand-labour being employed to put it into cocks, the horse-rake is run up the rows for the purpose of drawing the crop into heaps, which with the aid of a hand fork are readily shaped into cocks.

My own practice is to use a horse rake of the greatest capacity for this purpose, and for this reason. If a horse-rake with tines of small capacity is used the hay is compressed to a very undesirable extent. From long observation, I am satisfied that the most useful and efficient horse rake for most purposes upon a farm, and especially for drawing grass into heaps for cocking, is one with very capacious tines. When horse rakes were emptied of their load by hand, weight and size of tine were an important consideration, but now that the power of the horse instead of the man is employed for relieving them of their load, there is not the same reason for restricting the size of the tines.

The object of a good manager will be to get his hay into cocks as speedily as possible, especially upon the appearance of a storm—he should therefore be provided not only with the right kind of implements for the purpose, but with a sufficient number. Upon this point I will not dwell, further than to observe that I have known many a crop ruined, not only from an insufficient number of hands being employed, but from dependence upon a single implement when two, at least, were necessary or desirable.

I have had no experience of the system of big cocks so general in the North of England and other portions of the kingdom. In a damp climate, or in cases where the hay has to be carted a long distance to the homestead, these big cocks may be desirable, but for similar districts to my own, or where expedition is the order of the day, I fail to see any advantage in the method. (2)

CARRYING.

What are the indications of fitness of the crop for carrying is a critical question, and one impossible to express fully upon paper, experience alone must ever remain the chief guide upon so practical a matter. Of course, the smell and the feel are the chief indications of fitness or infitness—some test the

(1) This refers to meadow hay. Clover is never teded. A. R. J. F.

(2) I have had experience in big cocks! The best way to spoil hay.

A. R. J. F.

fitness by twisting bunches in the hand, and in the case of clover, if it breaks readily upon being twisted, it is regarded as a sign of fitness. If upon being squeezed, juice exudes from the stems of clover, it is an indication of unfitness.

In the clearing of the ground, and in loading, much economy of labour may be effected, for instance, in the case of three full sets loading together with a pair of pitchers and one loader to each cart or wagon, nine rakers to follow, if hand labour has to be resorted to, would be required to keep the work well up, whereas if the horse-rake is employed, first to clear the space between the rows, and subsequently to follow the carts and wagons, the nine rakers are dispensed with, and their services available for the stacking or other work. The loading will also go on more expeditiously as the pitchers will not have to wait for the rakers to unburden their drags.

STACKING.

With regard to the ricks, the first point for consideration is the foundation. a good one may be formed with road scrapings or burnt clay, and as a foundation of this kind will last for very many years, it is an economical method to adopt in rick-yards or wherever hay is stacked year after year.

The size of the stacks will of course, be regulated in great measure by the size of the holding. When the acreage is large, ricks twelve yards long, six yards wide, and four and a-half or five yards high to the eaves when settled down is a convenient size—they are *more economically put up and finished*, a larger proportion of good quality is ensured, and less waste from tops, bottoms, and outsides is entailed, than is the case with a larger number of small stacks.

In order to carry up the walls of the stacks as high as I advocate, the use of an elevator or a portable pitching stage is necessary. The relative cost of thatching is, of course, lower with high stacks than with low ones, and with a pitching stage or an elevator the extra cost of stacking is trifling.

I prefer leaving a central flue or chimney in the stack, for if it does not happen to be required little or no harm is done. Care should be taken to keep the flue straight, for if not perpendicular the stack in setting will close the flue.

Of the two evils, carrying too soon and carrying too late, I think the former the lesser one, inasmuch as, with the aid of an elevator, a stack which may get too warm may very readily be transferred from one side of the rickyard to the other, and thus cooled down.

In the harvesting of marsh-hay, and crops not thoroughly made, it is alleged that they may be stacked with safety by placing layers of clean dry straw at intervals. The advocates of the plan maintain that the straw absorbs the redundant moisture, injurious heating is prevented, and a flavour is imported to the straw which renders it palatable to cattle. The proportions are one load of straw to three or four loads of hay. I have never tried the plan myself, but I have heard it well spoken of by those who have adopted it.

In stacking hay that has been damaged by exposure, it is not an uncommon practice to strew salt upon it as the building of the stack proceeds, the object being to render the hay more palatable, as well as to check undue fermentation when, from the condition of the crop, such may be expected to set in.

Mr. Howard concluded with references to Dutch barns, and the fan system of drying ricks and ensilage, which we may reproduce hereafter. *Ag. Gazette—England.*

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